AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior listings of claims in the application:

1. (Currently amended) A chimeric peptide represented by formula (I) or formula (II),

(I) $N\text{-}(S)_m\text{-}(T_h)_n$

(II) $(T_h)_n\text{-}(S)_m\text{-}C$

or chimeric peptides which are mixtures of formula (I) peptides, mixtures of formula (II) peptides, or mixtures of formula (I) and formula (II) peptides, wherein:

N is the first 2, 3, 4, or 5 amino acid residues from the free N-terminus of a naturally-occurring internal peptide cleavage product that is formed by proteolytic cleavage of a precursor protein or a mature protein;

C is the last 2, 3, 4, or 5 amino acid residues from the free C-terminus of ~~said~~ a naturally-occurring internal peptide cleavage product that is formed by ~~proteloytic~~ proteolytic cleavage of a precursor protein or a mature protein;

T_h is a T helper cell epitope;

S is a spacer amino acid residue;

m is 0, 1, 2, 3, 4, or 5; and

n is 1, 2, 3, or 4.

2. (Previously presented) The chimeric peptide or peptides according to claim 1, wherein said internal peptide cleavage product is an amyloid β peptide that is formed by proteolytic cleavage of β amyloid precursor protein (βAPP).

3. (Previously presented) The chimeric peptide or peptides according to claim 2, wherein said internal peptide cleavage product has an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 3, 4, 5, 6, and 7.

4. (Original) The chimeric peptide or peptides according to claim 1, wherein N is the first 2 or 3 amino acid residues from the free N-terminus of said internal peptide cleavage product.

5. (Original) The chimeric peptide or peptides according to claim 1, wherein C is the last 2 or 3 amino acid residues from the free C-terminus of said internal peptide cleavage product.

6. (Original) The chimeric peptide or peptides according to claim 1, wherein T_h is a promiscuous T helper cell epitope.

7. (Previously presented) The chimeric peptide or peptides according to claim 6, wherein said promiscuous T helper cell epitope is a T cell epitope from tetanus toxin, pertussis toxin, diphtheria toxin, measles virus F protein, hepatitis B virus surface antigen, *Chlamydia trachomitis* major outer membrane protein, *Plasmodium falciparum* circumsporozoite, *Schistosoma mansoni* triose phosphate isomerase, or *Escherichia coli* TraT.

8. (Original) The chimeric peptide or peptides according to claim 7, wherein said promiscuous T helper cell epitope has an amino acid sequence selected from the group consisting of SEQ ID NOs: 8 to 27.

9. (Original) The chimeric peptide or peptides according to claim 1, wherein S is glycine.

10. (Original) An immunizing composition, comprising an immunizing effective amount of the chimeric peptide or peptides according to claim 1 and a pharmaceutically acceptable carrier, excipient, diluent, or auxiliary agent.

11. (Original) The immunizing composition according to claim 10, wherein said pharmaceutically acceptable auxiliary agent is an adjuvant.

12. (Original) The immunizing composition according to claim 11, wherein said adjuvant is alum.

13. (Withdrawn-Currently amended) A method for immunization against the free N-terminus or free C-terminus of an internal self peptide cleavage product that is formed by proteolytic cleavage of ~~derived from~~ a precursor protein or a mature protein, comprising administering to a mammal the immunizing composition according to claim 10, for which the internal peptide cleavage product is a self molecule of the mammal.

14. (Withdrawn) The method according to claim 13, wherein the mammal is a human.

15. (Withdrawn-Currently amended) The method according to claim 14, wherein the internal self peptide cleavage product is an amyloid β peptide~~, which when naturally occurring, is~~ that is formed by proteolytic cleavage of ~~derived from cleavage of~~ β amyloid precursor protein (βAPP). ~~, whereby said method raises antibodies specific to the free N-terminus and/or free C-terminus of the amyloid β peptide.~~

16-20. (Cancelled)

21. (Currently amended) A chimeric peptide represented by formula (I) or formula (II),

(I) ~~N-(S)$_m$-(Th)$_n$~~ N-(S)$_m$-(T_h)$_n$

(II) ~~(Th)$_n$-(S)$_m$-C~~ (T_h)$_n$-(S)$_m$-C

or chimeric peptides which are mixtures of formula (I) peptides, mixtures of formula (II) peptides, or mixtures of formula (I) and formula (II) peptides, wherein:

N is the first 2, 3, or 4 amino acid residues from the free N-terminus of a naturally-occurring internal amyloid β peptide cleavage product that is ~~derived~~ formed by proteolytic cleavage of an amyloid precursor protein;

C is the last 2, 3, or 4 amino acid residues from the free C-terminus of said naturally-occurring internal amyloid β peptide cleavage product, that is formed by proteolytic cleavage of an amyloid precursor protein;

[[Th]] T_h is a T helper cell epitope;

S is a spacer amino acid residue;

m is 0, 1, 2, 3, 4 or 5; and

n is 1, 2, 3, or 4.

22. (Previously presented) The chimeric peptide or peptides according to claim 21, wherein m is 1, 2, 3,4, or 5.

23. (Previously presented) The chimeric peptide or peptides according to claim 21, wherein said internal amyloid β peptide cleavage product has an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 3, 4, 5, 6, and 7.

24. (Previously presented) The chimeric peptide or peptides according to claim 21, wherein N is the first 2 or 3 amino acid residues from the free N-terminus of said internal amyloid β peptide cleavage product.

25. (Previously presented) The chimeric peptide or peptides according to claim 21, wherein C is the last 2 or 3 amino acid residues from the free C-terminus of said internal amyloid β peptide cleavage product.

26. (Currently amended) The chimeric peptide or peptides according to claim 21, wherein [[Th]] $\underline{T_h}$ is a promiscuous T helper cell epitope.

27. (Currently amended) The chimeric peptide or peptides according to claim 25, wherein said promiscuous T helper cell epitope is a T cell epitope from tetanus toxin, pertussis toxin, diphtheria toxin, measles virus F protein, hepatitis B virus surface antigen, ~~Chlamydia trachomitis major outer membrane protein, Plasmodium falcipam circumsporozoite, Schistosoma mansoni triose phosphate isomerase, or Escherichia coli TraT~~. *Chlamydia trachomitis* major outer membrane protein, *Plasmodium falciparum* circumsporozoite, *Schistosoma mansoni* triose phosphate isomerase, or *Escherichia coli* TraT.

28. (Previously presented) The chimeric peptide or peptides according to claim 26, wherein said promiscuous T helper cell epitope has an amino acid sequence selected from the group consisting of SEQ ID NOs:8 to 27.

29. (Previously presented) The chimeric peptide or peptides according to claim 21, wherein S is glycine.

30. (New) An immunizing composition, comprising an immunizing effective amount of the chimeric peptide or peptides according to claim 21 and a pharmaceutically acceptable carrier, excipient, diluent, or auxiliary agent.

31. (New) The immunizing composition according to claim 30, wherein said pharmaceutically acceptable auxiliary agent is an adjuvant.

32. (New) The immunizing composition according to claim 31, wherein said adjuvant is alum.

33. (New) A method for immunization against the free N-terminus or free C-terminus of an internal self peptide cleavage product that is formed by proteolytic cleavage of a precursor protein or a mature protein, comprising administering to a mammal the immunizing composition according to claim 30, for which the internal peptide cleavage product is a self molecule of the mammal.

34. (New) The method according to claim 33, wherein the mammal is a human.

35. (New) The method according to claim 34, wherein the internal self peptide cleavage product is an amyloid β peptide that is formed by proteolytic cleavage of β amyloid precursor protein (βAPP).